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EC68-1519 Corn Insects Below Ground

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CORN INSECTS - BELOW GROUND

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1. CORN ROOTWORM ADULTS: Northern corn rootworm, western corn rootworm, southern corn rootworm (top to bottom). Northern and western corn rootworm beetles deposit eggs in late summer that overwinter in the soil. The southern corn rootworm deposits eggs in the soil in the spring and summer, and apparently does not overwinter in Nebraska. Overwintering eggs begin to hatch in late May and continue to hatch for several weeks. The western corn rootworm is the most important species in Nebraska, and is state-wide in distribution.

2. CORN ROOTWORM LARVA: After eggs hatch, the small larvae feed on small roots of corn, burrow and prune larger roots. The larvae of all three kinds are similar in appearance—white with a dark brown head, and a brown spot on the upper surface of the tail. When fully grown they are about ½ inch long.

3. LODGED CORN: Goose-necking is typical following rootworm damage. Plants with damaged roots are easily blown over. If they straighten, the crooked stalk is a symptom of corn rootworm infestation. Strong winds and herbicide injury can also cause goose-necking of corn.

4. ROOT DAMAGE BY ROOTWORMS: Severe damage by rootworms can kill small plants, or large plants under drought conditions. Yields may be seriously reduced due to loss of roots, and harvest losses as a result of lodging. Root damage by western and northern corn rootworms is not known in plants other than corn. Usually the peak of root damage in Nebraska occurs about July 1.

5. WIREWORMS: Wireworms may damage corn the first and second year following pasture, stubble, or other grass crops. Most kinds of wireworms remain in the soil from 3 to 5 years before reaching the adult "click beetle" stage. Wireworms damage corn by eating seeds before they germinate, and chewing into underground stalks which may kill small plants.

6. WHITE GRUBS: White grubs are larvae of June beetles. Damage to corn may occur when sod ground is planted to corn the first year. Grubs feed on roots, will kill small plants, and stunt larger plants.

7. BLACK CUTWORM: This is the most common corn cutworm in eastern Nebraska. Other kinds may damage corn in central and western Nebraska. The black cutworm is most common in low, poorly-drained and grassy spots of fields. Cutworms work mostly at night and cut plants at or just below ground level. Larger plants are sometimes injured by cutworms chewing into stalks at or just below ground level.

8. CORN ROOT APHID: Corn growth may be stunted and leaves turn yellow when plants are 4 to 10 inches high by corn root aphids sucking sap from roots. Root aphids are placed on roots by ants. The presence of numerous small ant hills around corn plants may be an indication of root aphids.

9. GRAPE COLASPIS: Damage rare in Nebraska. Corn following legumes in southeast counties may have some colaspis damage. The grub is about 1/6 inch long when mature, and damages corn by feeding on roots.

10. SEED CORN MAGGOT: Injury most likely to occur in early planted corn when soil is cold and germination delayed. Maggots normally feed on decaying vegetation, but can reduce stands by feeding on seeds.

11. SEED CORN BEETLES: Two kinds of seed corn beetles attack seeds under the same conditions as seed corn maggots.

12. BILLBUGS: Billbug injury to corn is sometimes important in eastern and southeastern Nebraska. They commonly breed in sedge grasses, but may injure corn, especially in low and grassy fields. Adults and grubs feed on plants below soil level and in stems. Plants may show rows of small holes across leaves.

CONTROL INFORMATION: These color illustrations are designed to help identify some of the more important insect pests of corn below ground. University of Nebraska Entomologists prepare control leaflets that are revised each year. For the latest control leaflets, visit your local county agent, or write to the Department of Entomology, University of Nebraska, Lincoln, Nebraska 68503.

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CORN INSECTS—BELOW GROUND

For safe and effective use of insecticides, always identify the problem correctly.



2. Corn rootworm larva



5. Wireworm



6. White grub



3. "Goose-neck" symptoms of corn rootworm infestation



7. Black cutworm



8. Corn root aphid



1. Corn rootworm adults (top-bottom: Northern, Western and Southern)



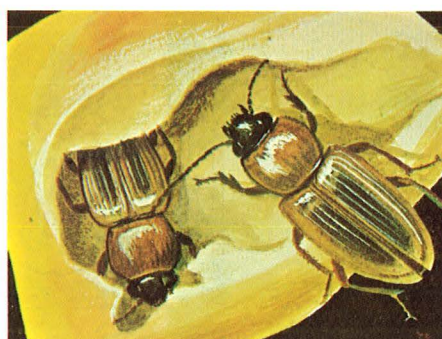
4. Corn rootworm damage



9. Grape colaspis and damage



10. Seed corn maggot



11. Seed corn beetle



12. Billbug (feeds on seedling corn plants below ground; holes in lower leaves of larger corn are evidence of this earlier feeding)